Re: FYI

Schmidt, Maxie D <mdschmidt@gatech.edu>
Sat 8/22/2020 9:05 PM

To: Kuske, Rachel A <rachel@math.gatech.edu>

📎 2 attachments (128 KB)
GTPDInvolvement-GTServiceDesk.pdf; GTPDInvolvement-MaxieInitialInquiry-GTServiceDesk.pdf;

Rachel,

It would also make my mind rest more at ease if you would take custody of the attached PDF documents regarding my report to OIT about the door reader vulnerability, and their reaction to involve GTPD. I take them at their word in response to my questions and forthcoming nature about suppressing firmware source code for this long.

For what it is worth, both Professors Croot and Lacey have seen a demo of my logger app for the Chameleon Mini devices. The former called it "cyber punk" looking as a hacker, or security, application for Android. The latter helped me hold the semi-detached microUSB cable to my phone so I could show him an in person working demo of my software in his office space -- and is therefore, as guilty as I am in the eyes of university administration, should it come up. 🙂

If you want to make a point as a "co-conspirator" to do ethical white hat hacking deeds for the greater good on campus, or are otherwise just interested in the topic, I have a spare (non-bluetooth-enabled) Chameleon RevG Tiny device that I received from Lab401 to do testing at no cost to me. I can drop it off in your mailbox with a cable to attach it to a Droid phone for logging purposes on the SOM readers, if you are hip to that.

Stay safe.

Maxie

From: Schmidt, Maxie D <mdschmidt@gatech.edu>
Sent: Saturday, August 22, 2020 8:32 PM
To: Kuske, Rachel A <rachel@math.gatech.edu>
Subject: Re: FYI

Rachel,

As far as the topic related to buzz cards, I don't know if anyone in the school has the expertise to advise you on that. That may be something to check into just to make sure that is all OK. I don't want you to be feeling vulnerable because of anything related to your work in that area.

I do not expect anyone within SOM to be able to advise me on the BuzzCard projects. This and the

NFC pen-testing (e.g., penetration testing topics security-wise) software I have gotten into since coming to Tech is very much something I have picked up on my own, and that I do as a hobbyist aside from pure math. In general, I like to spend time writing software both because it is easy for me to do, even when I cannot think -- as in in my sleep, and because it gives me a sense of accomplishment: Compared to math research, I can always see a product that I have built with my own hands in code at the end of the day!

I did contact OIT about how and why GTPD was alerted to my report with them. They said they involved GTPD because of the threat to physical access systems on campus, not to report me, or anything I had done leading me to report the vulnerability to campus security authorities. (Check: ✅)

Perhaps some history to this project is in order:

I wanted my phone (always on my person) to be able to be swiped with the door readers on campus so I would not have to carry around (remember to carry around) my BuzzCard to get into buildings. This led me to buy one of the Chameleon Mini (RevG) boards to help figure out what the phone would need to understand and transfer to make this happen. As it turns out, and as I currently understand things, this idea should have been a no-go situation as the DESFire NFC tag embedded in the BuzzCard has secret 3DES and AES keys that cannot be read easily. After I logged some bits and plotted them out (with highlighting of repetitive trends) while swiping the BuzzCard against the door readers, I concluded that there is no sophisticated crypto-based auth scheme going on since basically the same data is exchanged every time we ping the door reader with the BuzzCard. If there were a cryptographically inclined auth procedure going on, I should only see randomized jibberish transferred over NFC. This eventually prompted me to contact OIT and let them have my dataset to inform them there is a HUGE problem here. As it turns out, administration and the like on campus are going to be unhappy with me for letting them know this because the door readers are expensive pieces of hardware to replace and/or reprogram.

I hope this explains things better.

Maxie

From: Kuske, Rachel A <rachel@math.gatech.edu>
Sent: Thursday, August 20, 2020 2:48 PM
To: Schmidt, Maxie D <mdschmidt@gatech.edu>
Subject: Re: FYI

Thanks, Maxie,

That may be a good plan after your discussion with Josephine tomorrow, to figure out if there is a particularly good local source of support. I understand you have passed all the comps etc.-congratulations!-so this may be a good time to figure out how to get you the best advice going forward on your degree. I will mention this to Xingxing, to see what is a good next step for that.

As far as the topic related to buzz cards, I don't know if anyone in the school has the expertise to advise you on that. That may be something to check into just to make sure that is all OK. I

don't want you to be feeling vulnerable because of anything related to your work in that area.

Thanks –

Cheers,
RK

Rachel Kuske
Professor and Chair
School of Math, Georgia Tech
404 894 9238

On Aug 20, 2020, at 11:02 AM, Schmidt, Maxie D <mdschmidt@gatech.edu> wrote:

Rachel,

I will admit that I have been under a lot of stress recently for a multitude of non-centered reasons. I agree with you that finding someone here at GA Tech that would be a more local source of support, or even SOM type advocation, is a good idea. I do not feel that I have a good working relationship with my current adviser, and that some of his close contacts with my adviser before him have carried over in ways that are not getting spoken about for me in a productive way. Based on your response below, I assume you would prefer that I not go into a point-by-point (document-by-document) explanation of relevance? I am set to meet with Josephine tomorrow afternoon. She seems to have expressed that it might be possible for us to discuss whether there would be funds she knows of to support this project.

I want to point out that my harsher language towards Michael about some of what I view to be poor-sported attitudes directed towards me, this time at the expense of my excitement to propose a project that I am genuinely excited to work on, has nothing to do with funding, per se, nor his choice not to support it. I really get irritated at the idea that he might insinuate that idea, or otherwise blow that aspect of imperception out of order when there is a deeper cause for the conflict.

Maxie

From: Kuske, Rachel A <rachel@math.gatech.edu>
Sent: Thursday, August 20, 2020 9:14 AM
To: Schmidt, Maxie D <mdschmidt@gatech.edu>
Subject: Re: FYI

Hi Maxie,

Thanks for your email and also previous emails. Please do not be concerned about sending me emails, I'm not sure what you heard from Michael, but the only thing I had written to him was that there were some options for applying for small amounts of funding around campus.

I am concerned that your email below sounds like you are under a lot of stress, and particularly during these times we would like to make sure that people are not under undue stress. My recommendation is that we help you to find someone to talk to help address your concerns. I'm glad to hear you had mentioned you had some long standing friends to talk to.

If you are finding that your discussions with Michael have not been helpful, I notice that you have copied Josephine on your email to me. Perhaps she or other faculty could suggest some places for you to discuss your concerns? Hopefully I am correct in understanding your email to me, and that you would like some guidance on your concerns.

Thanks again and I look forward to hear how we can be helpful.

Cheers,
RK

Rachel Kuske
Professor and Chair
School of Math, Georgia Tech
404 894 9238

> On Aug 20, 2020, at 3:36 AM, Schmidt, Maxie D
> <mdschmidt@gatech.edu> wrote:

Dr. Kuske,

Since we have never met, nor been introduced, I want to make something about myself perfectly clear to you up front. If we have a problem, it will be very apparent, not hidden behind doors, and I *will* bring it to your attention in my own unique way, I assure you of that. This is all to say that I prefer to keep things straightforward, or not deal with people at all.

A very good friend of mine at UBC for the last 15 years or so talked sense to me in my head this morning as I ruminated over too many smoke breaks. She has always been willing to put up with or at least talk with me, even when no one else would have been willing at times. Thankful for this, I will send the first genuinely clear headed 3AM

email I have ever drafted in good conscience, and without malice, asking you to do the same. Please keep the attachments (indexed chronologically from 0) confidential to the best of your discretion.

When someone from the research ethics office on campus contacts you (if they do), you will at least have been briefed on the relevant documentation beforehand. Michael made some very offensive remarks to me today suggesting I had made a grave career mistake in my appeal for you to read my innocent proposal for applied crypto and software funding. This led to a very visceral reaction from me that prompted my email report. He will say one thing, I read clearly another.

Stay safe.

Maxie

<0-Gmail - Your article in The Ramanujan Journal (323): Information Required.pdf>
<1-Gmail - Journal placement of a proof of unboundedness of the sort-scaled Mertens Function-relevanrt.pdf>
<2-Gmail - Obtaining a small amount of funding for applied crypto research.pdf>
<3-Proposal for funding of a functional DESFire NFC firmware stack for Chameleon Mini devices.pdf>
<4-PleaForFreedomOfMyRepo-Untitled.pdf>
<5-IncidentRpt-Untitled.pdf>